Touchboards
205 Westwood Ave, Long Branch, NJ 07740
Phone: 866-94 BOARDS (26273) / (732)-222-1511
Fax: (732)-222-7088 | E-mail: sales@touchboards.com

USER GUIDE

2X4 HDMI 1.3 Extender / Splitter over Single CAT5

Model #: HDM-C5SP-4

HD ready 1080p HDMI HDCP 7.1CH Audio X.V.Color

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Section 1: Getting Started

1.1 Important Safeguards

Please read all of these instructions carefully before you use the device. Save this manual for future reference.

What the warranty does not cover

- Any product, on which the serial number has been defaced, modified or removed.
- Damage, deterioration or malfunction resulting from:
    - Accident, misuse, neglect, fire, water, lightning, or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the product.
    - Repair or attempted repair by anyone not authorized by us.
    - Any damage of the product due to shipment.
    - Removal or installation of the product.
    - Causes external to the product, such as electric power fluctuation or failure.
    - Use of supplies or parts not meeting our specifications.
    - Normal wear and tear.
    - Any other causes which does not relate to a product defect.
- Removal, installation, and set-up service charges.

1.2 Safety Instructions

The Avenview HDM-C5SP-4 HDMI 1.3 Extender / Splitter over CAT5 has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipment's, the HDM-C5SP-4 should be used with care. Read the following safety instructions to protect yourself from possible injury and to minimize the risk of damage to the unit.

- Do not dismantle the housing or modify the module.
- Dismantling the housing or modifying the module may result in electrical shock or burn.
- Refer all servicing to qualified service personnel.
- Do not attempt to service this product yourself as opening or removing housing may expose you to dangerous voltage or other hazards
- Keep the module away from liquids.
- Spillage into the housing may result in fire, electrical shock, or equipment damage. If an object or liquid falls or spills on to the housing, unplug the module immediately.
- Have the module checked by a qualified service engineer before using it again.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.

1.3 Regulatory Notices Federal Communications Commission (FCC)

This equipment has been tested and found to comply with Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.
Any changes or modifications made to this equipment may void the user's authority to operate this equipment.

1.4 Introduction

The Avenview HDM-C5SP-4 HDMI 1.3 over Single CAT5 Distribution Amplifier provides the most flexible solution by which the high definition video and high quality audio can be transmitted to different locations over a long distance. The devices are cascadable, allowing you to extend HDMI compliant displays almost anywhere. The 2 input HDMI source (only 1 input can be used at a time) can be duplicated and distributed to up to 4 HDMI enable displays through cost effective Cat-5/5e cables and RJ-45 to HDMI mini-extenders HDM-C5-R-M. With the built in equalization, the input HDMI cable can be extended up to 20 meters (66 feet) long under Full HD, and make the overall transmission distance superior than regular HDMI splitters or matrix switches in the market.

- Silicon Image chipset embedded for best quality, compatibility and reliability
- HDMI 1.3c compliant
- HDCP compliant
- Regenerates the HDMI signal
- Acts as 2X1 HDMI Switch and 1X4 HDMI over CAT5 Splitter
- Supports default HDMI EDID and has the ability to learn the EDID of the displays
- Supports default HDMI EDID and has the ability to learn the EDID of displays
- Extends up to 20m (66ft) of input HDMI cable
- Extends up to 60m (200ft) (720p / 1080i) of output CAT5/6 cable
- Extends up to 40m (130ft) (1080p) of output CAT5/6 cable
- Pure unaltered uncompressed 7.1ch digital HDMI over LAN cable transmission
- Allows cascading
- 1U rack mountable with interlocking power adapter for fixedness
- Perfectly integrated with other HDM-C5XD Series products

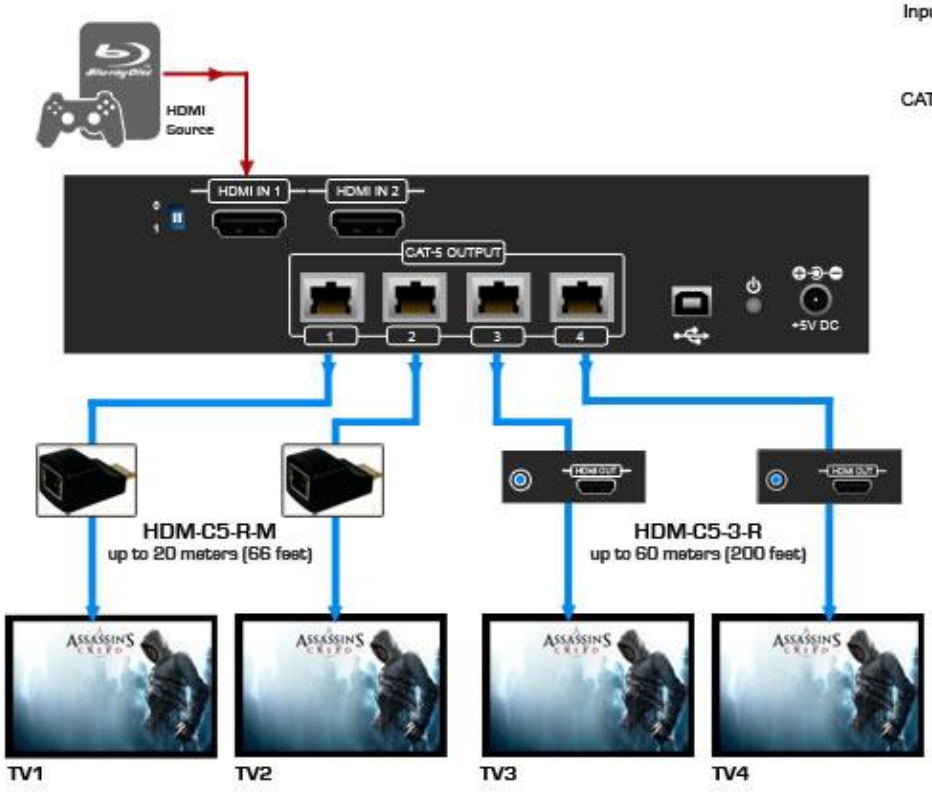
HDM-C5SP-4

720p/1080i = 50m (165 feet) **CAT5**
720p/1080i = 55m (200 feet) **CAT6**
1080p = 30m (130 feet) **CAT5**
1080p = 40m (165 feet) **CAT6**

LAYOUT 1

CABLE INDEX

- Output
- Input / Source
- Audio
- CAT-5 / CAT-6



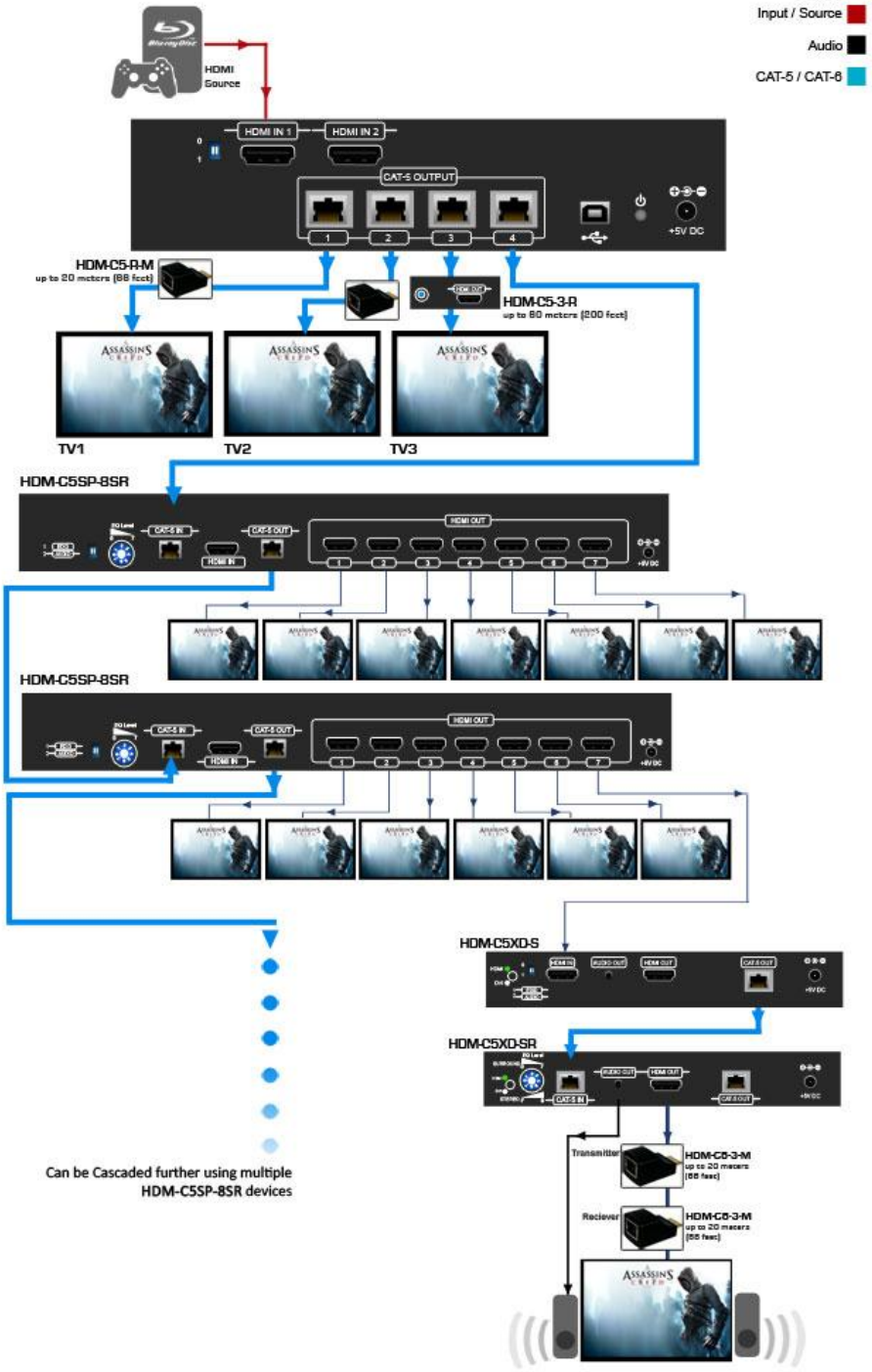
HDM-C5SP-4

LAYOUT 2

720p/1080i = 50m (165 feet) **CAT5**
720p/1080i = 55m (200 feet) **CAT6**
1080p = 30m (130 feet) **CAT5**
1080p = 40m (165 feet) **CAT6**

CABLE INDEX

Output
Input / Source
Audio
CAT-5 / CAT-6



1.5 Package Contents

Before you start the installation of the converter, please check the package contents.

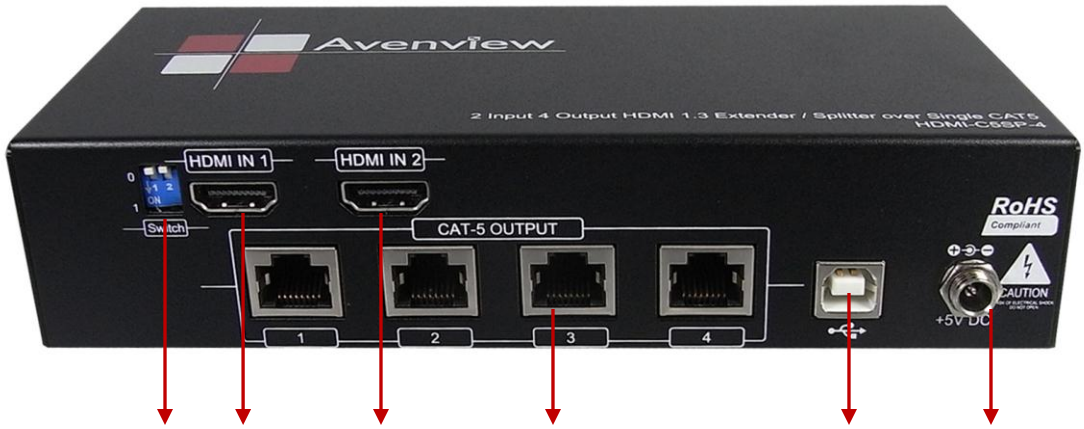
- HDM-C5SP-4 x 1
- Power Adapter (+5VDC, 4A) x 1
- User's Manual x 1

1.6 Before Installation

- Put the product in an even and stable location. If the product falls down or drops, it may cause an injury or malfunction.
- Don't place the product in too high temperature (over 50°C), too low temperature (under 0°C) or high humidity.
- Use the DC power adapter with correct specifications. If inappropriate power supply is used then it may cause a fire.
- Do not twist or pull by force ends of the optical cable. It can cause malfunction.

1.7 Panel Description

1.7.1 Rear Panel

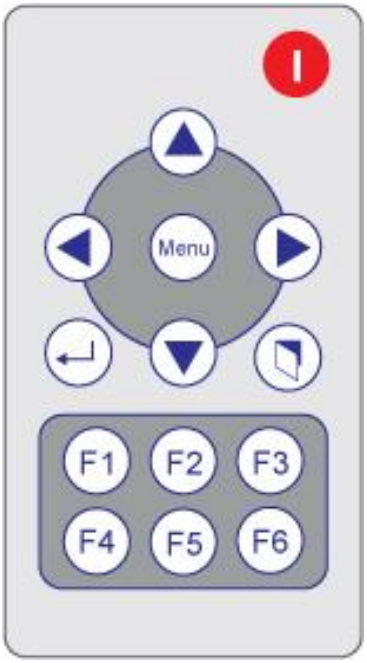


1 2 3 4 5 6

1. **DIP Switches** (details below)	2. **HDMI Input 1**
3. **HDMI Input 2**	4. **HDMI Output** over RJ45 (1 – 4)
5. **USB:** For Internal Use Only	6. **Power Jack**

1.8 IR Control

Function Key	Function Description
ON/OFF	Turn Output Port On/Off
F1	Select Source 1
F2	Select Source 2
F3	Mute the Sound



1.7.3 Dip Switch for EDID & Audio Settings

DIP Switch Position		Video	Audio	Description
PIN # 1	PIN # 2			
OFF ⬆	OFF ⬆	1080p	Stereo[1]	**Default Mode[2]:** Up to 1080p & Stereo output.
OFF ⬆	ON ⬇	720p/1080i	Stereo	**Safe Mode[3]:** Forces system to output at 720p/1080i with Stereo Audio.
ON ⬇	OFF ⬆	Bypass[4]	Bypass	**EDID Learning Mode[5]:** for learning EDID from the display while playing any received HDMI Audio format.
ON ⬇	ON ⬇	Bypass	Stereo	**EDID Learning & Stereo Mode:** For learning EDID from the display while enforcing stereo output.

1 If the HDTV shows video but without audio, please try to set audio mode to stereo

2 Factory default: Pin#1-OFF[⬆], Pin#2- OFF[⬆] for 1080p with stereo.

3 If you encounter any unsolved audio/video output problem during system installation, please turn to Safe Mode (Pin#1-OFF[▯] & Pin#2-ON[▯]) to enforce the most compatible 720p stereo output for system check.

4 Bypass means the matrix will maintain playing the original format of HDMI signals in video and perhaps audio. By setting at this mode, the users may encounter compatibility issue among different kinds of HDMI sources and displays. If you cannot get the audio and/or video output normally at the system installation, please change the DIP switch setting to default mode or even safe mode to verify the functionality of the device.

5 Set Pin#1 at ON[▯] first then connect the HDMI Input to HDTV through a HDMI cable. Wait for 20 seconds. The EDID learning procedure will be finished. If you want to learn the EDID from another HDTV, you must set Pin#1 at OFF first and repeat this procedure.

1.9 Installation

To setup Avenview HDM-C5SP-4 follow these steps for connecting to a device:

1. Turn off all devices including monitors / TV
2. Connect to a HDMI source (such as a Blu-Ray Disc player) to HDMI Input of HDM-C5SP-4
3. Connect the receiver HDM-C5-3-R or HDM-C5-R-M to HDM-C5SP-4 from RJ45 Out with CAT5 / CAT6 cable
4. Plug in 5V 4A DC Power (supplied).
5. Power on the HDMI display
6. Power on HDMI Sources.

Section 2: Specifications

Item	Description
Units	HDM-C5SP-4
Unit Description	HDMI 1.3 Transmitter / Splitter over CAT5 / CAT6
HDMI Compliance	HDMI 1.3c
HDCP Compliance	Yes
Video Bandwidth	Single Link 225 MHz (6.75Gbps)
Supported Resolutions	480i / 480p / 720p / 1080i / 1080p60
Resolution and Distance	**Full HD:** (1080p) ~ 40meter (130feet) (CAT5e) / 50meter (165feet) (CAT6) **HD:** (720p/1080i) ~ 50meter (165feet) (CAT5e) / 60meter (200feet) (CAT6)
Audio Support	Surround Sound (up to 7.1 Ch) or Stereo Digital Audio
Equalization	-
Input TMDS Signal	1.2 Volts (peak-to-peak)
Input DDC Signal	5 Volts (peak-to-peak, TTL)
ESD Protection	- Human body model — ±15kV (air-gap discharge) & ±8kV (contact discharge) - Core chipset — ±8kV
Input	2 x HDMI
Output	4 x Rj45
HDMI Connector	Type A (19 pin female)
RJ45 Connector	WE/SS 8P8C with 2 LED indicators
Dimensions (L x W x H)	8.5” x 3.3” x 1.6”
Power Supply	5V 4A DC
Power Consumption	10 Watt (max)

Environmental

Operating Temperature	32˚ ~ 104˚F (0˚ to 40˚C)
Storage Temperature	-4˚ ~ 140˚F (-20˚ ~ 60˚C)
Relative Humidity	20~90% RH (no condensation)

Notice

1. *If the DVI or HDMI device requires the EDID information, please use EDID Reader/Writer to retrieve and provide DVI/HDMI EDID information.*
2. *All HDMI over CAT5 transmission distances are measured using Belden 1583A CAT5e 125MHz LAN cable and ASTRODESIGN Video Signal Generator VG-859C.3*
3. *The transmission length is largely affected by the type of LAN cables, the type of HDMI sources, and the type of HDMI display. The testing result shows solid LAN cables (usually in bulk cable 300m or 1000ft form) can transmit a lot longer signals than stranded LAN cables (usually in patch cord form). Shielded STP cables are better suit than unshielded UTP cables. A solid UTP CAT5e cable shows longer transmission length than stranded STP CAT6 cable. For long extension users, solid LAN cables are your only choice.*
4. *EIA/TIA-568-B termination (T568B) for LAN cables is recommended for better performance.*
5. *To reduce the interference among the unshielded twisted pairs of wires in LAN cable, you can use shielded LAN cables to improve EMI problems, which is worsen in long transmission.*
6. *Because the quality of the LAN cables has the major effects in how long transmission distance will be made and how good is the received display, the actual transmission length is subject to your LAN cables. For resolution greater than 1080i or 1280x1024, a CAT6 cable is recommended.*
7. *If your HDMI display has multiple HDMI inputs, it is found that the first HDMI input [HDMI input #1] generally can produce better transmission performance among all HDMI inputs.*

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